

REMARKS/ARGUMENTS

This Amendment is being filed in response to the Final Office Action dated August 19, 2009. Reconsideration and allowance of the application in view of the amendments made above and the remarks to follow are respectfully requested.

Claims 1-18 are pending in the Application. Claims 9-15 are withdrawn. Claims 16-18 are added by this amendment.

Claims 1 and 3-5 are rejected under 35 U.S.C. §102(b) over U.S. Patent Publication No. 2004/0137751 to Ou-Yang ("Ou-Yang "). Claims 2 and 8 are rejected under 35 U.S.C. §103(a) over Ou-Yang. Claims 6-7 are rejected under 35 U.S.C. §103(a) over Ou-Yang in view of Japanese Patent Publication No. JP 2001-307391. These rejections are respectfully traversed. It is respectfully submitted that claims 1-8 are allowable over Ou-Yang alone and in view of JP 2001-307391 for at least the following reasons.

In a Response to Arguments section of the Final Office Action, it is stated that (emphasis added) "[s]ince Ou-Yang teaches spreading over the surface of the entire disk substrate, the reference necessarily spread liquids between an inner radius r_i of the disk and an outer radius r_o , of the disk." (See, Final Office Action, page 2.)

The claims are amended herein to clarify that which is recited in the claims particularly "applying a liquid onto the rotating substrate ... to spread out the liquid into a layer substantially uniformly between an inner radius r_i offset from a center spindle hole and an outer radius r_o , and exposing the liquid layer to UV radiation to solidify the liquid layer ..."

As admitted in the Final Office Action (see, Final Office Action, page 2), Ou-Yang teaches application of the liquid from the center spindle hole outward.

It is respectfully submitted that the method of claim 1 is not anticipated or made obvious by the teachings of Ou-Yang. For example, Ou-Yang does not teach, disclose or suggest, a method that amongst other patentable elements, comprises (illustrative emphasis added) "applying a liquid onto the rotating substrate by rotating the substrate further in order to spread out the liquid into a layer substantially uniformly between an inner radius r_i offset from a center spindle hole and an outer radius r_o , and exposing the liquid layer to UV radiation to solidify the liquid layer" as recited in claim 1. JP 2001-307391 is introduced for allegedly showing elements of the dependent claims and as such, does nothing to cure the deficiencies in Ou-Yang.

Based on the foregoing, the Applicants respectfully submit that independent claim 1 is patentable over Ou-Yang and notice to this effect is earnestly solicited. Claims 2-8 respectively depend from claim 1 and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of the claims.

For example, the Final Office Action admits that "Ou-Yang lacks a teaching that the radial temperature profile has a shape substantially resembling the radial thickness profile resulting when δT_{ro} and δT_{ri} would be zero (i.e., when no heat is used)." (See, final Office Action, page 6.)

However, the Final Office Action concludes that (emphasis added) "it would have been obvious to one having ordinary skill in the art to have used a radial temperature profile that has a shape similar to the radial thickness profile when no heat is used because Ou-Yang teaches that a higher temperature at the outer periphery results in reduced thickness at the outer periphery (as compared to when no heat is used), therefore one would similarly conclude that the amount of heat

needed at any point along the radius would be relative to the thickness at that point along the radius when no heat is used. such that a uniform thickness is formed." This position is respectfully refuted.

While it is undisputed that that Ou-Yang shows that greater heat at the outer periphery results in a reduced thickness as compared to when no heat is applied, it is respectfully submitted that Ou-Yang draws no comparison between the thickness of the layer and the temperature to be applied across the surface of the disk. Further, it is respectfully submitted that there are an infinite number of temperature profiles that Ou-Yang could apply while applying more heat to the outer periphery. It is the Applicants and not Ou-Yang that surprisingly recognized that application of a radial temperature profile with a shape substantially resembling the shape of a radial thickness profile resulting when $\delta T_{ro} > \delta T_{ri}$ would be zero results in less variation in the thickness of the layer, as for example substantially recited in claim 2.

Clearly Ou-Yang did not come to this conclusion since as seen from the thickness profile provided by Ou-Yang shown in FIG. 3, Ou-Yang was only able to provide a variation of approximately 2 μm over the surface of the disk while the present method achieves variations of 1 μm and less. Accordingly, it is respectfully submitted that claim 2 is allowable for at least this additional reason as is claims 16-18.

Further, regarding the recitations of claim 8, the Final Office Action admits that "Ou-Yang lacks a teaching of first partially curing the liquid and then fully curing the liquid." (See, Final Office Action, page 6.) However, the Final Office Action then concludes that "it would have been obvious for one having ordinary skill in the art to have separated the curing process into two separate steps, instead of a single step, with the expectation of successful and equivalent results."

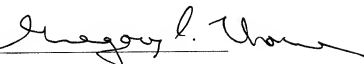
It must be respectfully pointed out that claim 8 recites more than simply partial curing of the liquid as suggested by the Final Office Action to leave a portion of the liquid unsolidified. In fact, claim 8 recites that "the act of exposing is performed in an atmosphere containing oxygen and at an exposure intensity, the act of exposing further comprises an act of inhibiting oxygen for leaving a top portion of the liquid layer unsolidified." Clearly since it is admitted in the Final Office Action that Ou-Yang does not teach, disclose or suggest partial curing, how can it be concluded that in light of Ou-Yang, it is obvious to introduce an act of inhibiting oxygen for leaving a top portion of the liquid layer unsolidified. Accordingly, it is respectfully submitted that claim 8 is allowable for at least this additional reason.

Accordingly, separate consideration of each of the dependent claims is respectfully requested.

In addition, Applicants deny any statement, position, or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Applicants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

Applicants have made a diligent and sincere effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited.

Respectfully submitted,

By 

Gregory L. Thorne, Reg. 39,398
Attorney for Applicant(s)
October 19, 2009

THORNE & HALAJIAN, LLP

Applied Technology Center
111 West Main Street
Bay Shore, NY 11706
Tel: (631) 665-5139
Fax: (631) 665-5101

Please direct all inquiries and correspondence to:

Michael E. Belk, Reg. 33,357
Philips Intellectual Property & Standards
P.O. Boax 3001
Briarcliff Manor, NY 10510-8001
(914) 333-9643